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(71) Applicant: TEXAS INSTRUMENTS INCORPORATED
13500 North Central Expressway
Dallas Texas 75265(US)

(72) Inventor: Ko, Uming U-Ming
240 Loch Haven Drive
Plano, Texas 75023(US)
Inventor: Andresen, Bernhard H.
10333 Mosscrest
Dallas, Texas 75238(US)
Inventor: Balko, Glen R.
1239 Richland Oaks
Richardson, Texas 75081(US)
Inventor: Keeney, Stanley C.
6429 Symphony Lane
Dallas, Texas 75227(US)
Inventor: Sexton, Joe F.
3778 Sunset
Houston, Texas 77005(US)

(74) Representative: Abbott, David John et al
Abel & Imray Northumberland House 303-306
High Holborn
London, WC1V 7LH(GB)

(54) **Integrated circuit having an embedded digital signal processor.**

(57) An integrated circuit chip comprises a digital signal processor core (12) formed on a portion of the surface area of the chip (10). The digital signal processor (12) has a read only memory (14), a random access memory (16), a register file (18), an arithmetic logic unit (20) and a multiplier circuit (22). The remaining surface area of the integrated circuit chip (10) forms a user-definable circuitry area (24) which is used to form added circuitry to interface the digital signal processor (12) with other components of an integrated data processing system. The circuits formed in the user-definable circuitry area (24) are coupled to other integrated circuit chips through universal input/output bond pads (28). In one embodiment of the present invention, parallel module testing multiplexers (26) are added to aid in the testing of the digital signal processor (11) and the added circuits formed in the user-definable circuitry area (24).

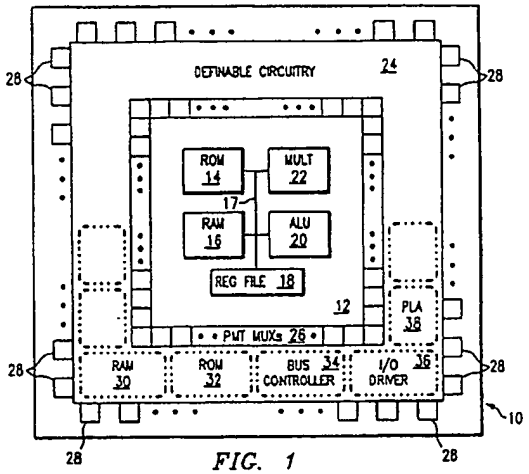

FIG. 1

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EUROPEAN SEARCH REPORT

Application Number

EP 90 30 9881

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	IEEE MICRO, vol. 8, no. 6, December 1988, pages 13-29; P. PAPAMICHALIS et al.: "The TMS320C30 floating-point digital signal processor" * Page 14, column 1, lines 37-46; page 18, column 1, lines 8-13; page 15, column 1, lines 1-17; figures 1,4 *	1,3,6,8,14	G 06 F 15/78
Y	IDEM	2,4,7,10	
Y	EP-A-0 243 113 (HITACHI) * Abstract; page 9, line 17 - page 11, line 8; figures 1,3 *	2,4,7,10	
A	PROCEEDING OF THE IEEE 1986 CUSTOM INTEGRATED CONFERENCE, Rochester, New york, 12th - 15th May 1986, pages 412-415; R. RASMUSSEN et al.: "Advanced testing techniques for structured asic products" * Page 412, column 1, lines 20-34; column 2, lines 6-15 *	2,4,7,10	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			G 06 F 15 G 06 F 11

The present search report has been drawn up for all claims

Place of search	Date of completion of search	Examiner
The Hague	10 June 91	WEINBERG L.F.

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